

Preliminary Amendment for US Patent Application Number 10/518,823

The Claims of the original application PCT US/03/19179 are hereby amended as follows:

10/518,823 New Claims Number	PCT US/03/19179 Old Claims Number
1	1
2	10
3	13
4	14
5	15
6	22
7	58
8	97
9	115
10	121
11	122
12	145
13	152
14	178
15	238
16	268

All other claims are deleted. The slate of amended claims is therefore, with old claims numbers in brackets, as follows:

1. (1) A method of facilitating the formation of a BIC between one or more buyers and one more sellers, for use as a building block in the formation of any financial derivatives contract, where both said BIC and said financial derivatives contract pertain to any number of underlyings, in a single or multi-period trading framework, for any notional amount, said method comprising the steps of:

a. establishing a BIC-basis ;

b. identifying agreement terms of said BIC, including at least:

- information to identify said one or more buyers and said one or more sellers,
- a contract time indicating when said BIC will become binding,
- a premium payment time posterior or equal in time to said contract time,
- a payout payment time posterior or equal in time to said premium payment time,
- a premium payment amount to be paid by said one or more buyers to said one or more sellers, expressed in the format of a function of observed values of the one or more underlyings from said contract time up to and including said premium payment time, and,
- a payout payment amount, expressed in the format of a function of observed values of the one or more underlyings from said contract time up to and including said payout payment time; and,

c. validating said BIC reflecting the agreement terms.

2. (10) A method of facilitating the formation of any financial derivatives contract between one or more buyers and one more sellers, for any number of underlyings, in a single or multi-period trading framework, for any notional amount comprising the steps of:

a. identifying agreement terms of said derivatives contract, including :

- information to identify said one or more buyers and said one or more sellers,
- a contract time indicating when said derivatives contract will become binding,
- a premium payment time posterior or equal in time to said contract time,
- a payout payment time, posterior or equal in time to said premium payment time,
- a premium payment amount to be paid by said one or more buyers to said one or more sellers, expressed in the format of a function of observed values of the one or more underlyings from said contract time up to and including said premium payment time, and,
- a payout payment amount, expressed in the DCWBSOF format; and,

b. validating said derivatives contract reflecting the agreement terms

3. (13) A method for compressing the format of the payout payment function of a derivatives contract on one or more underlyings, for a single or multi-period trading framework, for any notional amount, to facilitate decomposition into one or more BICs, said method comprising the steps of:

a. receiving said payout payment function expressed in DCWBSOF format, where said DCWBSOF format is a function of both

- observed values of the one or more underlyings from a designated contract time up until and including a designated payout payment time, and,
- parameters representing value choices available to said one or more buyers and said one or more sellers from said contract time up to and including said designated payout payment time; and,

b. transforming said payout payment function expressed in said DCWBSOF format into DCWOF format, where said DCWOF format is a function of the observed values of the one or more underlyings from said contract time up until and including said payout payment time but not parameters representing value choices available to said one or more buyers and said one or more sellers from said contract time up to and including said designated payout payment time.

4. (14) The method of claim 3 (13) wherein said transforming step comprises: iteratively assigning to the parameters, value choices to be made by the one or more buyers, in reverse chronological order, from said payout payment time to said contract time, whereby said value choices maximize, at each time step of the iterative process, the value of the contract to the one or more buyers.

5. (15) The method of claim 3 (13) wherein said transforming step comprises: iteratively assigning to the parameters, value choices to be made by the one or more sellers, in reverse chronological order, from said payout payment time to said contract time, whereby said value choices minimize, at each time step of the iterative process, the value of the contract to the one or more sellers.

6. (22) A method for transforming an initial derivatives contract, on one or more underlyings, for a single or multi-period trading framework, for any notional amount, into an ultimate portfolio of replicating BICs, for valuation and hedging purposes, said method comprising :

a. receiving a BIC-basis ;

b. receiving the payout payment function for said derivatives contract;

c. receiving prices for elements of said BIC-basis; and,

d. performing an iterative process to return said ultimate portfolio of replicating BICs.

7. (58) A method for providing the price of each BIC within an original BIC-basis of one or more related BICs, where each BIC of said original BIC-basis is considered an element of said BIC-basis, and where each BIC pertains to any number of underlyings, in a single or multi-period trading framework, for any notional amount n, said method comprising:

a. identifying any subsequent BIC-basis having elements with premium payment amounts derived from the premium payment amounts of said original BIC-basis of one or more related BICs ; and,

b. providing the premium payment amounts of each element of said subsequent BIC-basis using a functional formula

8. (97) A method for pricing a derivatives contract on any number of underlyings, in a single or multi-period trading framework, for any notional amount, comprising:

a. enabling a stakeholder to provide a description of said derivatives contract in a functional format;

b. enabling said stakeholder to provide a price for one or more basis instruments ; and,

c. providing a price for said derivatives contract responsive to steps a and b.

9. (115) A method for a first stakeholder in a financial transaction to incorporate credit risk sensitivity in the estimation of the value of a counterparty's liability, said method comprising :

a. creating a credit risk underlying whose value at any given time is equal to the percentage of the liability said counterparty honors at said given time, and where said percentage depends on the notional amount of said counterparty's liability at said given time, said first stakeholders identity and said counterparty's identity ; and,

b. multiplying the value of the liability said of counterparty at said given time by said credit risk underlying to obtain a result known as the value of the credit risk adjusted liability at said given time.

10. (121) A method for calculating the credit risk limit of a given counterparty by setting a maximum responsive to the difference between the value of the counterparty liability not inclusive of credit risk and the value of said liability inclusive of credit risk

11. (122) A method for determining a margin amount due by a stakeholder on a derivatives contract comprising:

a. determining a first payment amount by said stakeholder, where said first payment amount is viewed from the position of said stakeholders counterparty, when said counterparty is anticipating a default by said stakeholder ;

b. determining a second payment amount by said stakeholder, where said second payment amount is viewed from the position of said stakeholders counterparty when said counterparty is not contemplating a default by said stakeholder; and,

c. calculating said margin responsive to said first payment amount and said second payment amount.

12. (145) A method for incorporating supply and demand sensitivities in BICs premium payment amounts, in units of base currency comprising inputting a scaling density function relating the dependence of the first unit notional premium amount of said BICs to the premium amount for any other notional amount of said BICs.

13. (152) A method for automatically quoting BICs prices in a trading or exchange system comprising inputting functions representative of BICs prices responsive to offer and demand.

14. (178) A method for mediating trading in BICs comprising:

- a. establishing a BICs-basis;
- b. establishing a network to facilitate interaction between stakeholders under the supervision of a trading system management authority ;
- c. causing said network to communicate with said stakeholders to enable a determination of trading prices for BICs trades ;
- d. identifying relevant derivatives contracts ;
- e. decomposing said relevant derivatives contracts to create a portfolio of BICs ; and,
- f. finalizing a transaction in said portfolio of BICs.

15. (238) A method for managing risk on a portfolio of financial derivatives contracts comprising :

- a. maintaining an inventory of said derivatives contracts, where said inventory of said derivatives contracts is maintained in BICs units ;
- b. assessing the risk on said inventory of financial derivatives contracts responsive to said inventory; and
- c. re-allocating inventory responsive to assessing the risk on said portfolio.

16. (268) A method of accounting for derivatives contracts, in compliance with FAS 133 or IAS 39, to reduce volatility in periodic earnings, where said derivatives contracts are used to hedge against fluctuations in the value of a held asset, comprising:

- a. determining a BIC basis;
- b. determining a target value associated with the value of said held asset ;
- c. establishing a residual contract, where said residual contract is a portfolio containing:

- a long position in said derivatives contract,
- a long position in said held asset if said held asset is a long position held, and,
- a short cash position with value equal to said target value ;

d. decomposing said residual contract in said BIC basis; and,

e. reporting said residual contract in a net profit or loss as the non-hedging part of said derivatives contract.